

## SEPTIC SYSTEM UPGRADE

### WHY, HOW & HOW MUCH

By Dave Clark

#### WHY

A few years back we decided to upgrade our 1970 septic system. This was prompted by several factors. First: the old system was starting to drain slowly due to the normal biomat buildup around the drain pit. Second: we plan on selling our present home in the fairly near future and will need to upgrade to a Title V design in order to pass papers. Third: the economics of spending money on band-aids for a system that is at the end of its useful life.

In addition to the reasons above, a system could have actually failed. If you have ever had your system overflow out on to the ground, if there is ponding in the vicinity of your drain field, or you have a strong odor emanating from your system there is a good chance that it has failed. Title V calls for all failed systems to be repaired and/or upgraded.

This is a general guideline based on our upgrade to document what is involved and the anticipated costs.

#### HOW

You need to start with a Title V inspection of your current system, which should cost between \$250 & \$300.

The next step will be to hire an Engineer experienced in Title V Septic Design. He will review the existing system as detailed in the Title V Inspection Report and survey your property for the optimum siting of your new system. He will then prepare the detailed engineering drawings for your system. These professional services should range between \$2500 and \$3500 depending on the complexity of the design and the need for local variances. Keep in

mind that you will need to have suitable space to accommodate 110 square feet of gallery drain system for each bedroom of your home. For four bedrooms roughly 11' by 40' or 30' by 15' would be needed.

It is now time for the Percolation Test Application and Trench Permit from the town, which is presently \$250.

Next will be the actual "Perc Test" which needs to be coordinated between your Engineer, the Health Department, and your contractor. The contractor cost will be in the \$200 to \$500 range depending on accessibility of the site. The contractor digs a hole to the depth of the new system. The Engineer will confirm the proper depth and then carefully pour a certain amount of water into the hole recording the amount of time required for the water to drain, or percolate. This is done while a representative of the health department is in attendance. You are now ready for your Application for Disposal System from the town. The plans from your Engineer and the results from the perc test are reviewed and possible changes noted along with any variances. Once any required changes are made to the plans, the application can be approved after payment of another \$200 plus \$50 for each variance. Such variance could include insufficient lot size, system too close to the lot line, etc. At this point you can take the plans to contractors for competitive bids. Depending on the size of your system, the configuration of your lot, and the existing composition of the soil material, this price could run somewhere in the \$7000 to \$10,000 range. In our situation, the existing septic tank was re-used at a savings of about \$1300. To accomplish our installation the septic tank was pumped first thing in the morning and we were able to use the system during the day of installation. Installation will take one to two days.



*Digging up the yard.*

Once completed, the final inspection and Certificate of Compliance from the town will cost you another \$75.



*Two chambers in place.*

Finally, should anyone close to the pond wish to upgrade to include an Innovative/Alternative recirculating sand filter which would pretty much eliminate all harmful nitrogen discharge, the added cost would be \$7000 to \$9000 for a three to four bedroom dwelling. Depending on the size of your lot, number of bedrooms, and/or proximity to the pond the town could require this I/A addition to be in compliance with state requirements.

And, some good news: the state allows a tax credit of \$6000 over 4 years to help offset the cost of upgrading a failed or under performing system.



*Completing the installation.*